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ABSTRACT

The second phase of an analysis of the National Network for Curriculum Coordination in Vocational and Technical Education focused on the impacts of six regional centers on vocational educators. Another concern was the Network's overall contribution to curriculum-related activities and initiatives in vocational education. Specific issues were the impacts the Centers have had on their users, the nature and effects of relationships developed between the Network and other organizations involved in vocational education, and factors that have affected program impacts. These issues were investigated through various data collection activities, including case studies of the Curriculum Coordination Centers, participation in regional meetings, visits to other organizations involved in vocational education, and telephone interviews with vocational educators. Data indicated that the major purpose of the Network--to create a resource through which curriculum materials and resources would be readily available to practitioners--has been accomplished. The ready availability of materials resulted in savings of time and money to states in curriculum-related activities and reduced duplication of effort in curriculum-development efforts. The Federal investment in the program leveraged a considerable amount of state support. Recommendations were made in these areas: curriculum evaluation, outreach, impact reporting, and emerging technologies. Some data are appended. (YLB)

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AN ASSESSMENT OF THE IMPACTS AND EFFECTIVENESS OF THE NATIONAL NETWORK FOR CURRICULUM COORDINATION IN VOCATIONAL AND TECHNICAL EDUCATION

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POLICY STUDIES ASSOCIATES, INC.

FINAL REPORT

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Contract No.: 300-82-0380

September 1985

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Technical Monitor for this project was Ms. Dorothy Shuler, Planning and Evaluation Service, U.S. Department of Education.

ABBREVIATIONS USED IN THIS REPORT

ADVOCNET	-	Adult and Vocational Education Electronic Mail Network
CBVE	-	Competency-based vocational education
CCC	-	Curriculum Coordination Centers (Centers)
ED	-	U.S. Department of Education
ERIC	-	Education Resources Information Center
FTE	-	Full-time equivalent
LEA	-	Local education agency
LEP	-	Limited-English proficiency
MAVCC	-	Mid-America Vocational Curriculum Consortium
NCRVE	-	National Center for Research in Vocational Education
NNCCTVE	-	National Network for Curriculum Coordination in Vocational and Technical Education (Network)
OVAE	-	Office of Vocational and Adult Education
RCU	-	Research Coordinating Unit
RFP	-	Request for Proposals
SEA	-	State education agency
SLR	-	State Liaison Representative
TE	-	Teacher educator
VECM	-	Vocational Education Curriculum Materials
V-TECS	-	Vocational-Technical Education Consortium of States

EXECUTIVE SUMMARY

Since 1972, the Office of Vocational and Adult Education (OVAE) of the U.S. Department of Education (ED) has provided support for the operation of the National Network for Curriculum Coordination in Vocational and Technical Education (the Network), a discretionary program consisting of six regional Curriculum Coordination Centers and a network of State Liaison Representatives (SLRs), whose time is donated by state departments of vocational education to participate in Network activities. The broad purpose of the program is to provide a mechanism for sharing information on vocational curriculum materials in order to avoid unwarranted duplication of effort in curriculum development activities, increase the transportability of curriculum materials, and enhance the quality of state and local curriculum development efforts.

Purposes of the Study

This report is the second phase of an analysis of the operations, management, and impacts of the Network in addressing its purpose. Specific issues addressed in this report include: (1) the types and extent of impacts the Centers have had on their users; (2) the nature and effects of relationships developed between the Network and other organizations involved in vocational education; and (3) factors that have affected program impacts. These issues were investigated through a variety of data collection activities, including case studies of the six Curriculum Coordination Centers, participation in regional meetings of Center staff and SLRs, visits to other organizations involved in vocational education, and telephone interviews with selected SLRs and other state and local vocational educators.

Study Conclusions and Recommendations

Major findings that emerged from the study's data collection and analysis activities include the following:

- The major purpose of the Network--to create a structure through which curriculum materials and resources would be readily available to practitioners--has been accomplished.

- The ready availability of materials through the Network has resulted in savings of time and money to the states in their curriculum-related activities and has reduced duplication of effort in curriculum-development efforts.

- A chief benefit of the program has been the creation of a nationwide communications network that has facilitated the spread of curriculum materials and resources, as well as new approaches and technologies, to vocational educators at the state and local levels.

- The federal investment in the program has leveraged a considerable amount of state support for the Centers and Network, including funding for individual Centers and donation of SLR time for conduct of Network activities.

The major recommendations concerning the program include the following:

- The Network should consider implementing a curriculum review procedure that would provide endorsement of materials meeting high standards of quality.

- Increased outreach efforts would be useful in enhancing the program's capacity to accomplish its curriculum coordination objective.

- The Network should consider implementing a reporting system that would provide a clearer picture of Center and Network accomplishments.

- Individual Centers should be encouraged to adopt particular areas of emerging technologies as a special concentration in addition to their base library resources, a strategy that would provide users with a specified place for obtaining needed materials in such high-cost areas as robotics or computer-assisted machining.

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I. INTRODUCTION

Since 1972, the Office of Vocational and Adult Education (OVAE) of the U.S. Department of Education (ED) has provided support for the operation of the National Network for Curriculum Coordination in Vocational and Technical Education (the Network), a discretionary program consisting of six regional Curriculum Coordination Centers (CCCs) and a network of State Liaison Representatives (SLRs), whose time is donated by state departments of vocational education to participate in Network activities. The broad purposes of the Network, as articulated by the program's founders, are:

- To provide a mechanism for the sharing of information on curriculum materials available and under development
- To develop and recommend guidelines for curricula and curriculum development with the ultimate goal of increasing the effectiveness of curriculum materials and enhancing their transportability
- To establish and maintain a system for determining curriculum needs in vocational-technical education and reporting conclusions to the field
- To coordinate activities in curriculum development, dissemination, and utilization with the aim of avoiding unwarranted duplication, enhancing quality of effort, increasing the transportability of curriculum materials, and improving the acceptance and use of curriculum materials
- To report these curriculum coordination efforts to the field

These purposes have been translated into operational objectives to which each Center responds in the competitive procurement process under which Center contracts are awarded. These operational objectives for the six Centers (with minor variations

across the three Requests for Proposals (RFPs) under which the Centers operate) are as follows:

- To increase the availability of curriculum information and materials to instructional program improvement personnel
- To promote the adoption and adaptation of curriculum materials developed with Federal, state, and local funds in order to minimize duplication
- To improve the quality of vocational educational curriculum and dissemination services provided to public, private, and proprietary schools
- To establish linkages with other organizations or information-sharing systems in the vocational education community (RFP 84-007)

Purposes of the Study

The study whose findings are presented in this report is the second phase of an analysis of the operations, management, and impacts of the Network in addressing these objectives. An earlier report[1] presented the findings of a descriptive study of the operations and management of the Network, including information on (1) the structure of the Network, (2) the major categories of services and activities provided by the regional Centers to state and local vocational educators, (3) the users of Network services, and (4) factors that influence the effectiveness of the Network in achieving its purposes.

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[1] Becky Jon Hayward, Anne H. Hastings, and Linda A. LeBlanc, Operations and Management of the National Network for Curriculum Coordination in Vocational and Technical Education (Reston, VA: Advanced Technology, Inc., October 1984).

This report focuses on the impacts of the regional Centers on vocational educators and the Network's overall contribution to curriculum-related activities and initiatives in vocational education. Specific issues addressed in this report include:

- The types and extent of impacts the Centers have had on various categories of users: SLRs, other state vocational educators, local vocational education administrators and teachers, and vocational education teacher educators
- The nature and effects of relationships developed between the Network and other organizations involved in vocational education
- The factors that have affected program impacts

It is important to note, in reviewing the findings presented in this report, that while the underlying rationale for the Network's existence has to do with improvement in the quality and outcomes of vocational education generally, the objectives under which the Centers operate are quite specific and process oriented. The focus of this impact study has been governed by the objectives established by OVAE for the regional Centers. Thus the Network's effectiveness is assessed here by determining the following:

- Whether the federal investment in the program has resulted in wider availability of curriculum and instructional materials across the country
- The extent to which states share information and resources and thereby reduce the costs and time required for curriculum development or adoption
- The efficiency and effectiveness of dissemination of curriculum and instructional materials within and among states
- The extent to which the Centers and Network have established viable relationships with other vocational education organizations

While some broader effects and implications are addressed in the final chapter of this report, the report primarily focuses on evidence of the extent to which the program's specific objectives have been realized.

In order to provide a context for the findings reported in later chapters, in the next section of this chapter we provide a summary description of the program based upon information obtained in both phases of the analysis.

Summary of the Program

The Network was created in 1972 to provide a mechanism for state and local education agencies to coordinate curriculum activities and share curriculum resources. The Network is structured around six regional Curriculum Coordination Centers intended to serve the states and territories within their regions. (Appendix A lists the regions and states served by each Center.) Each state or territory is formally linked to one of the six Centers through an SLR, who is appointed by the State Director of Vocational Education. The SLR serves as the primary point of contact for persons in the state who need Network services, representing the state to the Center and the Center to the state. Coordination among the Centers is provided by the seven-member Directors' Council, comprising the six Center Directors and one ex-officio member representing ED. While the six regional Centers, the 57 SLRs, and the Directors' Council constitute the formal structure of the Network, actual Network activities and outcomes have also been influenced by formal and

ad hoc relationships the Centers have developed over time with other organizations or information-sharing systems, such as the National Center for Research in Vocational Education (NCRVE) and a number of vocational education consortia.

Program funding and administration. The Network is funded under the provisions of the Programs of National Significance (Subpart 2, Part B of the Vocational Education Amendments of 1962, as amended), which authorizes federal discretionary funds for extending and improving vocational education. While the amount of annual federal support of the Network has varied over its 13-year history, in recent years federal funding has remained relatively stable at approximately $775,000. In 1984 the federal investment in the Network was $773,494, with individual Center budgets ranging from $88,762 to $174,804.

Each Center operates under a three-year contract administered by the Program Improvement Systems Branch of OVAE. The contract for the first year's performance period is competitively awarded, with two subsequent years covered by noncompetitive continuations. Center contract periods are staggered such that each year two of the six Centers are recompeted. This phased contracting procedure has two effects. First, variability in the amount of discretionary funds available to OVAE at the time of each competition causes some of the variation in the size of the Centers' budgets. In years when federal discretionary funds are scarce, RFPs reflect a somewhat reduced scope of work, often eliminating one or more regional meetings, reducing or eliminating technical assistance visits, or deleting funds for a Regional

Communique. A second result of the phased contracting is that some part of the Network can respond each year to new developments and evolving federal priorities.

The Network's Directors' Council has several functions. One is to provide recommendations to ED concerning national priorities and policies affecting the Centers. Another is to facilitate linkages and coordinated efforts between the Network and other organizations involved in vocational education program improvement. The Council convenes three times each year to review new developments and advise ED on whether new activities should be authorized. However, the degree to which the Directors' Council can coordinate the work of the Network is constrained. One reason is that, while agreeing on the overriding goals of the Network, Council members represent their own Centers and thus bring differences in philosophy and priorities to the Council. They are also obligated to fultill the terms of individual Center contracts, which vary in the specific activities to be pursued and which do not explicitly authorize joint determination of Network priorities.

With its federal funds each Center is contractually bound to perform five major tasks:

- Participate as a member of the Directors' Council
- Serve as a facilitator to the consortium states in the region
- Abstract the Center's library materials for the national computerized curriculum data base and forward updates to NCRVE
- Prepare and submit periodic progress reports to ED
- Provide annual summary impact information to ED

Under the competitive procurement process, each Center proposes its own approach for serving as a facilitator to states in its region. The variations in the types of activities each Center undertakes and the manner in which they are carried out can be attributed to differing perceptions by Center Directors regarding the proper role of the Centers, the specialized needs of the states they serve, and differences in the amount of federal funding each Center receives. For example, some Directors believe a Center should serve states essentially as a curriculum library. Others focus on a larger array of curriculum-related initiatives, (e.g., vocational education curriculum evaluation, new approaches to curriculum development). This "expansionist" view of the Center's role may be attributable not only to the level of OVAE funding or a Director's perception of the Center's appropriate role but also to the financial support some Centers receive from the state departments of vocational education in which those Centers are located.

Center activities. While some of the activities of the Centers address multiple purposes, the activities can be grouped under three broad classifications: information resources, capacity building, and linkage and outreach. An overview of these classes of activities follows.

In the area of information resources the Centers provide a number of services. The core function of each Center is to serve as a library of curriculum materials. SLRs send curriculum materials that have been developed in their states to their regional Centers, which categorize and distribute the materials

to other states upon request. In past years, states have been asked to send enough copies of materials to their Center to allow dissemination to other Centers and all 57 SLRs. This practice has permitted virtually every state to accumulate its own library of curriculum materials developed in other states. The growth of such curriculum resource centers or libraries has enabled numerous states to satisfy many of their curriculum needs using only their own resources, contacting the Center only when state-held materials proved inadequate.

In recent years some states have found the request to supply the Network with sufficient copies for all Centers and all SLRs to be financially or logistically too burdensome. In such instances sufficient copies may be provided only for the six Centers or even only for the state's regional Center. These Center-held materials are typically loaned to requesting states for a short period of time for their preview or use as a resource. Further, some states that sell state-developed curriculum materials do not share materials with the Network, although this arrangement appears to be changing, with more selling states sharing their materials for preview. Additionally, Centers purchase copies of some materials (e.g., consortia catalogs) for preview use by their states.

The Centers do not typically screen incoming materials for quality. Most Center staff members believe that any such centralized screening might eliminate from the resource base certain materials that could have some utility in a local setting whose vocational education needs and circumstances were unknown

to the Center. Some Centers are making changes in this regard, however. For example, one Center is asking SLRs to rate the quality of the materials they review so that others requesting materials will have some information on how the materials are viewed.

To facilitate distribution of materials, most Centers prepare catalogs or bibliographies that states can use to identify potentially useful materials and request loans ot those materials for previewing. Some Centers use microfiche in this cataloging and previewing function, although others have found microfiche unacceptable. Computerization of catalogs is an emerging trend within the Network. At least two Centers are in the process of making their catalogs, task listings, and other materials available on-line to enable client states to examine materials directly through an electronic bulletin board, without waiting for loan copies, and another Center routinely sends catalogs on disks to persons requesting them. Some Centers, in fact, provide incentives to their states to participate in the electronic systems by offering start-up funding for terminals and staff training and holding conferences to acquaint state staff with system capabilities.

This automation initiative is also an important factor in another central information-resource function ot the Centers, performing regional or national searches for materials for state and local requestors. While most Centers still perform telephone and paper searches, particularly for materials still under development, they now rely to a significant extent on the Vocational

Education Curriculum Materials (VECM) database, an automated curriculum information system developed as a joint Network/NCRVE initiative. Each SLR is encouraged to abstract newly developed materials and forward the abstracts to the regional Center, where they are edited and subsequently transmitted to NCRVE, for inclusion in this database. SLRs are also being encouraged to access VECM directly without going through the regional Center.

The Centers also use electronic mail, primarily through the Adult and Vocational Education Electronic Mail Network (ADVOCNET). Managed by NCRVE, ADVOCNET allows state and local vocational educators to transmit messages, documents, meeting announcements, and other information throughout the country.

Capacity-building activities, targeted primarily toward the SLRs, and, by extention, to state and local vocational educators, include the annual Concurrent Meeting of all 57 SLRs as well as one or more Regional Meetings each year. The Concurrent Meeting brings all SLRs together for a week that includes seminars on new approaches to curriculum development and dissemination, visits to exemplary vocational education institutions, and sessions on strategies for increasing the effectiveness of SLRs within their state systems. Training sessions to introduce new SLRs to the Network's objectives and activities are held one day prior to the annual Concurrent Meeting.

Capacity building is also one focus of the Regional Meetings of SLRs. At these meetings, which sometimes are co-sponsored by two Centers, SLRs are apprised of new curriculum-related developments through seminars, presentations, and workshops. The intent

is that SLRs will return from a Regional Meeting with new knowledge that is then applied, or at least further pursued, within their own states.

In addition to these SLR-focused meetings, the Centers perform other functions intended to build state and local users' capacity. Technical assistance to state and local vocational educators is provided by the Centers through inservice training, workshops, and consultation. Due to funding constraints, however, the number of technical assistance visits reported by the Centers has steadily declined over the last three years, from 49 in 1982 to 32 in 1984. Another significant capacity-building activity of the Centers has been to assist individual states in the establishment of state curriculum laboratories and resource centers.

Centers inform potential clients of their information services and capacity building through a number of outreach and linkage efforts. Some Centers receive federal support for production of a Regional Communique, mailed to state and local vocational educators, that includes descriptions of Center services and articles on current issues in vocational education. Some of the Centers have secured state funding to produce descriptive brochures about their services for distribution to potential Center users. In many states SLRs make presentations about Center services at workshops and other meetings.

Another means of Network outreach is represented by the SLRs through their ongoing communications with vocational educators in their states. Distributing materials, responding to local

requests, providing technical assistance, and other Center-supported, SLR-executed activities constitute important outreach mechanisms. Displays announcing Network services are often used by SLRs and Center staff at state and local conferences and workshops to inform vocational educators about the Network.

Over the last decade, the Network has also established linkages with such organizations as NCRVE, the Mid-America Vocational Curriculum Consortium (MAVCC), the Vocational-Technical Education Consortium of States (V-TECS), and other organizations involved in vocational education. The relationship of NCRVE to the Network cuts across all six Centers and is formally established through the VECM database, the ADVOCNET system, and other joint projects. The Network's relationships with NCRVE, curriculum consortia, and other related organizations help spread information about the Network to a wider range of potential users and facilitate the sharing of products and other resources.

Role of the SLRs. SLRs are in many ways the key to the entire Network. The time SLRs devote to the Network is donated by their states, with Center contracts reimbursing only their travel expenses for attending Regional and Concurrent meetings. Many SLRs occupy key positions in the state vocational education systems, and their state responsibilities overlap considerably with their SLR role. Centers, while having virtually no formal leverage over SLRs due to the SLRs' voluntary status, rely heavily upon these individuals in achieving their objectives. In fact, the perception of those involved in the Network is that the

degree of personal commitment of SLRs to the goals of the Network is the single most critical variable affecting Network success.

The SLRs are known as the "linkages" in the Network. They help shape Center policy by communicating their states' curriculum-related needs to the regional Centers, while state and local personnel rely on SLRs for obtaining Center-provided materials and services. In a few states all requests for Center services are channeled through the SLR, although most state and local users are encouraged to contact the Center directly. The Centers rely on the SLRs to provide state-related information and materials, such as newly developed curricula.

Center reporting requirements. The six Centers report to OVAE quarterly and annually on their activities and accomplishments. The format and substance of their impact reports have been the subject of considerable work by Center Directors over the years, owing in part to the problems inherent in tracking the utilization and impacts of dissemination and capacity-building activities and in part to the variability in the curriculum-related activities of individual states. Impacts are currently reported in "Key Results Areas" grouped under these broad activity categories: coordination and management, curriculum services, and dissemination and utilization.

Because the reporting formats include many Key Results Areas associated with the Network's past priorities, accomplishments that occurred in past years continue to appear in each annual report (e.g., existence of state curriculum resource centers). An additional problem is the inconsistency of definitions and

tabulation principles used by SLRs as they volunteer state information for use by the Centers. Analysis of these and other issues concerning the Centers' reporting requirements is presented in Appendix D of this report.

Study Methods

In order to assess the impacts of the Network on users of its services, the study team conducted a variety of data collection activities, including a review of available program information, site visits to the Centers and other vocational education organizations, telephone interviews with vocational educators in a sample of states, and attendance at several Network/Center meetings. A brief description of data collection and analysis activities is provided in this section.

Analysis of available program information. This task involved two activities: (1) review and analysis of the 1984 Impact Reports submitted by the Centers to OVAE and (2) review of the Center files maintained by OVAE, which consist primarily of Center proposals and related contractual and budgetary information. The Center impact reports were reviewed in order to identify how program impacts are measured and reported and to assess the feasibility of reporting Center activities using the categories of information resources, capacity building, and linkages/outreach. Contract files maintained at OVAE were analyzed to obtain 1984 federal funding levels and to identify how the Centers budgeted these funds across major expenditure categories.

Site visits. Each of the six Centers was visited during either Phase I or Phase II of the study. The purpose of the visits was to identify regional and Center-specific factors that might influence Center use and impacts. At each Center, interviews were conducted with the Director and Center staff regarding all aspects of Center management and operations, including state-specific mechanisms used for accessing the Center and its resources.

To examine fully the extent to which the Network has become an integral component of the nation's dissemination and improvement system for vocational education, site visits were also conducted at NRCVE and V-TECS. In addition, a telephone interview was conducted with the Executive Director of MAVCC.

Telephone interviews. Because of time and cost constraints, telephone interviews with Network users could only be conducted in a sample of states. A sample of 15 states was determined to be large enough to provide variation among states yet small enough to allow us to track the flow of Network resources and impacts at various user levels by interviewing several respondents in each state.

A six-celled sampling frame was constructed along the dimensions of state curriculum practices (producer or consumer)* and level of state vocational education resources and activities

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* Producers are those states that engage in curriculum development activities. Consumers purchase most of their curriculum materials.

(high, medium, or low). Center Directors were then asked to categorize each of the states in their region along these two dimensions, and states were assigned to one of the six cells, as depicted in Table I-1.

Table I-1

Sampling Frame Used for Selection of States for Telephone Interviews

State Level of Vocational Education Curriculum Resources/Activities	Curriculum Producer	Curriculum Consumer	Total
High	n = 15	n = 2	17
Medium	n = 11	n = 9	20
Low	n = 0	n = 14	14
Total	26	25	51

Once all 50 states and the District of Columbia had been included in the sampling frame, we purposively selected from each region two or three states that varied in terms of the sampling criteria. Three states were selected from each of the Midwest, East Central, and Northwest Regions, and two states were selected from each of the three smaller regions. The final sample of states resulted in the following configuration.

State Characteristics	No. of States
High Resources/Producers	4
Medium Resources/Producers	3
High Resources/Consumers	1
Medium Resources/Consumers	3
Low Resources/Consumers	4
	15

The overall purpose of the telephone interviews was to ask vocational educators about the services they receive from their regional Centers. Thus questions were keyed to particular characteristics of each Center and each state selected within a Center's region. Telephone interviews were conducted in each of the sample states with the following categories of respondents:

- State Directors of Vocational Education
- State Liaison Representatives
- State-level vocational educators
- Local-level vocational educators
- Teacher educators

In each state, respondents were asked about the services they receive from their regional Center. Interviews with State Directors were designed to obtain their perceptions of the Center providing services to that state and the effects of those services as well as information concerning state vocational education policy and practices that might influence those perceptions. The areas covered in interviews with Center users included degree of familiarity with their SLR and regional Center, use of Center resources, Center impacts, and general

perceptions regarding Center/Network effectiveness. SLR interviews addressed each of these areas in greater detail.

Individuals interviewed at the state and local levels were randomly selected from a list of users whose names we obtained from the Centers and the SLRs. The study design called for interviews to be conducted with two state-level users, two local-level users and one teacher educator from each state. However, in one state, only one state-level user other than the SLR could be identified. In another state, none of several teacher educators whose names were provided by the Center were still working in the state, and the SLR was unable to supply users in this category. Finally, in states where SLRs had been in that position for only a few months, we also interviewed the previous SLR. In sum, 103 telephone interviews were completed as follows:

Respondent	No.
State Directors of Vocational Education	15
State Liaison Representatives	15
State-level users	29
Local-level users	30
Teacher educators	14
Total	103

Users at the state and local levels occupied a wide range of positions. State-level users typically held supervisory or consultant positions in a vocational area such as home economics, business and cooperative education, industrial arts, health occupations, or agriculture. Also represented in the state-level

interviews were Research Coordinating Unit (RCU) Directors, a Resource Center Coordinator, a Research and Planning Section Chief, an assistant to the Deputy Director for Vocational Education, and specialists in such areas an interlibrary cooperation, sex equity, and high-risk youth, among others. Most of the local level respondents were county or area-wide Directors or Assistant Directors for Vocational Education. High school teachers, community college deans or program directors, and Directors or Assistant Directors of Vocational-Technical schools constituted the remaining respondents.

Network meetings. Members of the study team attended a meeting of the Directors' Council in early April 1985 to observe and collect information concerning the Council's role in coordinating Network activities. Study team members also attended the 1984 Concurrent Meeting, the Regional Meeting of the Midwest Center in early April 1985, and the Joint Meeting of the Southeast and East Central Centers in late March 1985. These meetings allowed us to meet many of the SLRs from states in those regions and to gain first-hand knowledge of the nature of these forums for information sharing, capacity building, and coordinated planning.

Data analysis. Data obtained through telephone interviews with Network users were analyzed to identify patterns of use, impacts, and perceptions of the Center/Network's utility across the various respondent categories. These data were examined in the light of contextual information associated with state policy and practice and various Center and regional characteristics

obtained through interviews with State Directors, site visits, and attendance at Network meetings. Broader impacts on the quality and effectiveness of dissemination and utilization in the vocational education curriculum system were examined largely within the context of the linkages the Network has established with related organizations.

Based upon our initial assumptions regarding potentially important factors affecting patterns of Network impacts, as well as the results of initial data tabulations, several cross-tabulations of the data were performed in an attempt to identify relationships between the three broad impact areas of information resources, capacity building, and linkages/outreach and certain variables associated with either the Centers or individual states. State characteristics examined as potential influences on how a state uses Center resources and how Center services affect state capacities included our initial sampling criteria of whether a state was a producer or a consumer of curriculum and the level of state resources and activity in vocational education curriculum. Other state factors we investigated included the presence of a state curriculum lab, membership in a curriculum consortium, whether users contact the Center directly or through the SLR, whether the state is under a mandate to implement competency-based curriculum, and a number of other state-related factors. We also examined the data to see if any regional variations were evident and might be explained by Center-related characteristics such as funding levels, variation in services, or

linkages with other organizations involved in vocational education curriculum.

Organization of Report

The findings and conclusions that emerged from the study's data collection and analysis are presented in the remaining chapters of this report. Chapter II presents the study's major findings concerning patterns of the Center/Network's activities and impacts in information resources, capacity building, and linkages/outreach. Chapter III presents conclusions and recommendations based on the study's findings. Tables displaying selected data items from the SLR and state and local user interviews are presented in Appendices B and C, respectively. Appendix D includes an analysis of the Centers' impact reporting system.

II. STUDY FINDINGS

The major study findings presented in this chapter are organized around Center/Network activity areas: information resources, capacity building, and linkages/outreach. The primary data source for the section on information resources is the telephone interviews; for capacity building, this source is supplemented by information from the Regional and Concurrent Meetings; for linkages/outreach, the data sources are interviews with other vocational education organizations and telephone interviews. Information obtained from users of Center resources was characterized by a high level of consistency and did not reflect variability along state or regional characteristics, and other factors that were initially expected to influence the nature and extent of the program's impacts. Consequently the study's findings are reported in the aggregate.

Information Resources

Goals of the Centers/Network include the provision of mechanisms for (1) sharing information on curriculum materials and the materials themselves, (2) increasing the effectiveness and transportability of these materials, and (3) avoiding duplication of effort by encouraging adoption and adaptation. The regional Centers address this goal through several means. They serve as information repositories or libraries. They disseminate to the states and territories copies of materials that developing states wish to share. They support tools for

curriculum developers such as VECM and electronic mail and, through meetings of their SLRs and contact with State Directors, promote the concept of adoption and adaptation.

Regional Centers as information repositories. Have Centers developed useful repositories of curriculum materials and encouraged the use of these materials? If they have, we would expect that SLRs who need curriculum materials would (1) reference curriculum developed by others rather than undertaking immediate development and (2) tap the resources made available through the Network's collection and dissemination of materials. We asked SLRs in our sample what procedures they typically follow when a need for specific curriculum materials arises in their state. In response to our open-ended question, all 15 SLRs told us they typically would begin by searching for existing materials, thus indicating that the Centers have met one criterion of success.

Eleven of the 15 SLRs reported that their first or second step would be to contact their regional Center. Two of the SLRs reporting a different sequence typically contact a consortium before their regional Center. Half of the SLRs reported that the first step they take when there is a need for curriculum materials is to review in-state resources. In most cases these SLRs go to a state resource center or curriculum development lab, housing among other things materials provided through the Network; in other cases they themselves coordinate a repository of Network-disseminated materials. Thus the Network provides support to the information sources to which these SLRs turn first. Table II-1 summarizes the SLRs' rankings of sources.

Table II-1

SLRs' Ranking of Sources Accessed in Meeting State Needs For Curriculum Materials (n = 15)

	Ranking*					
Sources	1	2	3	4	5	Total
State lab/center	7					7
Regional CCC	5	6		2		13
Consortium	2	1	1	1		5
Another CCC		1	1			2
NCRVE			1		1	2
Another state/SLR		3				3
Other	1	1	1			3

State and local users mentioned a variety of sources other than the Centers for curriculum materials or services, but no other single source was mentioned by more than 24 percent of the users. Seven sources were each mentioned by between 14 and 24 percent of users, including other states, consortia, in-state sources such as labs and resource centers, computerized data bases, colleges and universities, private organizations, and NCRVE. The diversity in these data strongly suggests the Networ is serving a centralized access purpose not otherwise being met.

Responses of SLRs indicate that there is nonetheless room for improvement in the use of the Centers' information resources. Asked if they believed their state made optimal use of available Center services, 10 of the 15 SLRs said they did not believe so.

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* Some SLRs cited less than 5 sources.

Reasons given included simply insufficient time to deal with the Centers on the part of SLRs (5 SLRs) and not enough awareness of the Center within the state (4 SLRs). Only two SLRs (from different regions) attributed their response to insufficient resources and capacity at their regional Centers.

Thus the Network Centers have apparently established themselves as useful sources of information and materials. Furthermore, the materials available through them are generally adequate, based on the evidence we obtained.

The emerging field of high technology was the only occupational area that SLRs reported their own regional Centers do not adequately address. This field was mentioned by eight SLRs across five of the six regional Centers. It was the only inadequacy mentioned for one regional Center, and this was the only Center for which the sampled SLRs expressed a consensus on a particular inadequacy. Four SLRs mentioned needs for more materials in more traditional areas such as electronics, hotel/motel, marine occupations, textile and leather manufacturing; however, no single area was mentioned more than once, and (outside of high technology) SLRs from the same Centers cited different needs. Similarly, we found no consensus among SLRs when we asked them about materials and services for special needs groups (e.g., handicapped, limited English proficient (LEP)). Only four perceived any inadequacy and each of these had a different experience.

Other state and local users corroborated the evidence provided by SLRs. Eighty-three percent believed the materials

they had received through the Centers were useful, and 87 percent perceived the materials to have been of high quality.

A basic premise for increasing the availability of information resources and encouraging adoption and adaptation is the concept of networking. A later section describes what the Network is doing to increase the capacity of curriculum developers to develop and use their own networks. Here we examine the Network channels used for accessing information.

Nine SLRs make use of Centers outside their own regions by contacting them directly. The remaining six SLRs do not go to other regional Centers directly, but tap such Centers only through their own Centers. Thirteen SLRs contact other SLRs directly. Seven of these contact only SLRs in their own region, but in all but one region at least one SLR in the sample networks with SLRs outside his or her own region.

The networking patterns among SLRs in our sample suggest that the regional assignments of states to Centers are appropriate. Only two SLRs reported that they exclusively contact SLRs in states outside their own regions, and no additional information from respondents in those states indicates dissatisfaction with their states' assignment to particular regions.

A general assumption is that users gain access to the Network through the SLR, although those familiar with the program agree there is variation in the emphasis placed on this avenue of access. We found that one-half of the users in our sample reported they only access the Network through their SLRs. One-quarter always go directly to the regional Center, and one-

quarter use both methods of access. The geographically dispersed Western Center users--only one of whom reported contacting the Center directly--account for one-half of those accessing the Network only through the SLRs. In the other regions, two-thirds of the system users contact their Centers directly. Of the three categories of users (state-level personnel, local-level personnel, and teacher educators), teacher educators are the ones most apt to make direct use of the regional Centers. Nine of the 14 teacher educators in our sample said they typically contact the Centers directly.

Tools of curriculum developers. The Centers have taken steps to encourage and help vocational curriculum developers to use emerging technologies in carrying out their job. The concept of VECM originated within the Network, and the currency and comprehensiveness of this database result from the submission of abstracts on products developed within the states to NCRVE via the Network. All of the states in our sample have the computer capability needed to access VECM directly. However, the vast majority of the SLRs reported continued reliance on their regional Centers or NCRVE to perform VECM searches. In general, searches, whether automated or paper, were the service that users most frequently reported obtaining from the Center (48 percent of users).

The regional Centers have also supported the concept of electronic mail and have encouraged states to participate in ADVOCNET. Among the possibilities for future use of ADVOCNET are communications related to planning regional and national

meetings, obtaining information from states regarding curriculum, and making announcements to SLRs regarding Center activities.

All but one of the states in our sample use the ADVOCNET electronic mail system. The single SLR not using ADVOCNET felt the regional Center provided sufficient information, thereby making use of the system unnecessary. Those who use ADVOCNET reported doing so because they find the system useful and timesaving.

Adoption, adaptation, and quality. A goal of the Network is to encourage adoption and adaptation of curriculum materials in order to reduce duplication of effort. In practice, states and territories may vary in their ability and willingness to adopt and adapt due to several factors. For example, curriculum exists within the broader context of state policies, and state organizational structure establishes the point of responsibility. State budgets dictate the resources that can be applied to curriculum development and improvement.

Despite the variety that exists along these factors across the states and territories, we spoke with only one State Director who described a philosophy and practices that are not compatible with the Network's goals regarding adoption and adaptation. We found a high level of consensus among the 15 State Directors in our sample regarding the importance of the Centers to the states' past and future ability to respond to curriculum needs. While several suggested ways in which the Network could better fit their specific needs, we found that the Network has managed to attain high utility to states despite state differences.

Six of the State Directors with whom we spoke described their regional Center as an integrated component of their curriculum program and reported that referral to the Center is a general practice when curriculum needs arise within the state. They told us they adopt or adapt curriculum materials whenever possible. Four gave us examples of how the Network has helped them with past curriculum needs. They reported instances where the state saved time and effort by building upon the work already accomplished by others. Two State Directors described only limited use of their Centers.

Four of the State Directors whom we interviewed spoke of their concerns regarding the future. As vocational education moves into the 1990's and the 21st century, these State Directors believe sharing, adoption, and adaptation will facilitate the system's ability to respond to changing needs. They see the Centers as playing an important role in this process.

The regional Centers disseminate curriculum materials such as curriculum guides, task lists, resource guides, instructional materials, and competency-based vocational education (CBVE) materials to vocational educators responsible for curriculum at state, regional, and local levels and to teacher educators. The users with whom we spoke use these materials most frequently in the preparation of new materials. One-half of our sample reported this application. One-third of the users reported that the materials they acquired through the Network were used for purposes of staff development and training of new teachers.

One-third of the users in the sample passed the materials on to others to use either in curriculum development or in training.

SLRs most frequently cited the Network's dissemination function as the reason for their perception that the Network and its services have improved their state's vocational education curriculum. One-half of the sampled SLRs described the contribution of increasing the pool of materials available to individual curriculum developers. One-quarter attributed the perceived effect to the improvement in their states' use of existing materials. In all, reasons given for improvement by two-thirds of the SLRs were related to this one function of the Network.

Capacity Building

The term "capacity building," as used here, refers to activities designed to result in either (1) the acquisiton of specific skills, knowledge, or awareness of individual vocational educators or (2) the acquisition or improvement of statewide systems for vocational educational curriculum development, dissemination, and utilization. Network influences on the capacities of specific individuals or state systems can be provided directly through meetings or the provision of information or technical assistance. The Network can also build capacity indirectly through the activities of SLRs, who draw upon Center resources in building the capacities of vocational educators in their state and in improving state capacities generally. Finally, Network impacts on individual or system capacities may be immediate in effect or may accrue over several years.

The Network attempts to build individual and organizational capacity because increased capacity in the system is one of its objectives and also because it depends on the SLRs and others to advance all its objectives. SLRs are an integral part of the Network's means of sharing information on curriculum materials, determining needs for curriculum materials, and coordinating development, dissemination, and utilization. Network effectiveness requires that these individuals have the requisite skills and knowledge to fulfill their responsibilities. All but two of the 15 SLRs with whom we spoke reported having major responsibility for curriculum or program development activities in their states, and all but three have positions overseeing general vocational education (as opposed to some specific programmatic area such as trades and industry or career education). Beyond the SLR, the Network's objectives are furthered when teacher educators, program specialists, area coordinators, and other curriculum developers undertake their work with an understanding and acceptance of the principles the Network represents.

Capacity building for the SLRs occurs primarily in three forums--at the Concurrent Meeting, at Regional Meetings, and through technical assistance. In the aggregate, 17 percent of the Network's budget is earmarked for travel, primarily in support of these activities. The Network's major means of building the capacity of other vocational educators are the technical assistance provided by the Centers, and workshops and technical assistance provided by SLRs. We discuss first the

capacity-building activities aimed at SLRs and then those aimed at others.

Capacity building for SLRs. Building the capacity of SLRs is a recurring theme within the Network. Not only do vocational education technologies and approaches change, but SLRs also change. The average SLR in our sample had been an SLR for four years, and two of the 15 had been SLRs for one year or less. This rotating and changing of the individuals having SLR responsibilities lead the Network to continuously provide training in networking skills. It also has the unintended effect of "spreading the word" through the vocational education system as former SLRs move from one job to another and even from one state to another.

The Concurrent Meeting is the major Networkwide forum for capacity building. It begins with a session for new SLRs on the responsibilities of SLRs and the resources available to them. During 1984, the Network undertook development of a competency-based training package for SLRs that will be used as the basis for this training in the future.

Presentations and inservice opportunities at the Concurrent Meeting are held in general sessions and mini-sessions. At the 1984 Concurrent Meeting, roughly 12 hours were dedicated to capacity building. Half of the capacity-building portion of the agenda was devoted to inservice in emerging technologies and new approaches to curriculum development, one-quarter dealt with networking skills, and one-quarter with national priorities. In

the evenings, SLRs could review products of commercial vendors and state-developed materials.

The Center Directors routinely evaluate the Concurrent Meetings using a five-point Likert scale to ascertain participants' perceptions of the importance and utility of the overall program and specific sessions. In 1984, SLRs recorded a rating of 4.72 for importance and 4.50 for the utility of the overall program. SLRs' ratings for the utility of individual sessions ranged from a low of 2.50 to a high of 4.75. Averaging the figures across sessions, SLRs reported the following levels of utility for presentations in the major capacity-building areas:

- 3.86 - national priorities and perspectives
- 4.08 - networking skills
- 4.06 - emerging technologies and new approaches

The Concurrent Meeting also gives SLRs the opportunity to meet their colleagues from all the states and territories. However, some SLRs with whom we spoke perceived that they do not take full advantage of the networking opportunities available in this national forum, tending instead to spend unstructured time with the SLRs they know from their own region. These individuals believed that smaller meetings better foster the creation and cementing of new relationships.

Concurrent Meetings are a contractually specified Network activity for the Centers. Each Center Director designates an SLR to represent the region on a planning committee which reports to the Director's Council. The role of host rotates among the Centers. Each Center is responsible for the travel expenses of

all SLRs in the region. The states cover the salaries of SLRs during their week away from regular duties while attending the Concurrent Meeting. Attendance figures for SLRs are high--a fact that not only validates the SLRs' relatively high evaluation of the utility of the meeting but also provides an indirect indication of State Directors' perceptions of its utility.

A second contractually described capacity-building activity of the Network is Regional Meetings. While all Network Centers are required to hold Regional Meetings, the number of meetings per year varies across Centers depending on the availability of federal funds for the base contract year. At the time of this study four Centers were funded to convene three meetings a year; two were funded for two meetings.

Each Center convenes one of the meetings in conjunction with the Concurrent Meeting where a day is set aside for regional sessions. These sessions typically include business items and sharing of new curriculum materials; capacity building occurs in other parts of the Concurrent Meeting agenda.

In other Regional Meetings, the proportion of the agenda set aside for capacity building varies. During the most recent cycle of Regional Meetings, five of the six Centers offered presentations on new or different approaches to vocational education curriculum; four held sessions intended to increase the SLRs' networking skills; and two scheduled presentations on the new Carl Perkins Vocational Education Act.

SLRs report that they bring useful skills and knowledge back to their states from the capacity building sessions at Regional

Meetings. Eleven of the 15 SLRs with whom we spoke had attended their region's latest meeting, while the other 4 had sent alternates. Ten of the 11 who attended a meeting reported having taken action on some new, specific information obtained from the Regional Meeting. Two had not debriefed their alternates at the time of our interviews and thus could not respond to our question. One had not yet had time to follow up on specifics from the Regional Meeting. One had planned the presentations and thus had not acquired new information.

SLRs use what they learn at Regional Meetings in various ways. In some cases, according to our interviews, they brief their State Directors on the information that might be useful for the state. Some have also arranged various types of follow-up events in their own states, including presentations for top state officials and workshops for local educators. Three SLRs in our sample reported having arranged workshops for vocational educators on some aspect of curriculum development or use.

Another major activity at Regional Meetings also builds the capacity of SLRs to link with their colleagues. This is the information-sharing portion of regional agendas, in which SLRs describe what their states are doing in curriculum development (in some instances circulating copies of products) and identify areas where their states need materials. Our observations indicate that these sessions contribute more to the Network than just sharing across states. They provide opportunities for each SLR to better understand the capabilities and resources of other states in the region.

Assessments by SLRs, Center Directors, and others who attend the Regional Meetings also indicate that these meetings stimulate and facilitate linkage among curriculum developers. The meetings help personnel in one state to acquire the capacity to tap skills and curriculum resources in other states. The mechanism for building this capacity is not exclusively formal. Linkage capacity is strengthened by conversations held over coffee, lunch, and dinner at Regional Meetings as SLRs with common vocational education interests seek one another out. The smaller, less structured environment of single region and joint Regional Meetings was seen and reported to have an advantage over Concurrent Meetings in this regard.

Summing up, when asked if their experience as an SLR had contributed to their professional development, the SLRs overwhelmingly responded that it had (14 of 15). They were unanimous in perceiving that their SLR experience had contributed to their effectiveness in their jobs. The reasons they gave for these assessments related directly to the Network's capacity-building efforts. Almost all reported their SLR experience had had these impacts by increasing their awareness of resources and developments in vocational education and by exposing them to new ideas. One-third of those in our sample reported that the Network-provided opportunity to interact with others in the field had contributed to their professional development.

Capacity building for other users of the Network. The ability of the regional Centers to sponsor capacity building among users is constrained by the contractual requirements and

funds for technical assistance, although Centers can provide such services on a cost-reimbursement basis. During 1984, there were 32 Network-sponsored technical-assistance visits reported system-wide. The number of visits per Center ranged from a high of nine to a low of two during that year.

Forty percent of the users with whom we spoke reported receiving curriculum-related capacity-building services either directly from their region's Center or through their SLR. Proportionally more users at the local level reported receiving capacity-building services than did those at the state level or the teacher educators in our sample (Table II-2).

Table II-2

Number of Network Users Receiving Capacity-Building Services

Capacity-Building Services	Users			
	Local	State	TE	Total
Inservice or workshop	11	4	3	18
Conference/presentation	1	3	1	4
Consultation	2	2	-	4
Technical assistance	-	2	1	3
None reported/received	16	17	9	43
Total	30	28	14	72

Those who received these services unanimously reported that they were indeed useful. Reasons given to explain the ways in which capacity building was useful included increased awareness, greater staff development, an aid in curriculum development, and a means to stay current in vocational education developments.

One intent of the Network's effort dedicated to building SLR capacity is to create momentum for building capacity throughout the vocational education curriculum system. While we did find evidence that this is occurring, it is not highly organized and thus not easy to track or measure. This may be an area in which there is room for improvement in the Network's effectiveness.

At another level are the indirect, longer term influences that have accrued to statewide vocational education systems as a result of Network-provided services. For instance, as discussed earlier in this chapter, the role of the Network in stimulating the establishment of state curriculum laboratories and resource centers and in providing curriculum materials for these centers from curriculum producing states has resulted in an increased capacity in many states to satisfy their curriculum needs using state-held resources.

Linkages and Outreach

Since the program's inception, the Network and individual Centers have developed formal and ad hoc relationships with other organizations involved in vocational education curriculum and program improvement. Such linkages have facilitated the sharing of materials and resources and have served as a vehicle for identifying and responding to emerging trends in vocational education. Linkages can also serve an important outreach function, helping persons in the field to become aware of the information and other resources the Network offers. Further, in addition to the outreach function served by relationships with

other organizations, each Center and the Network as a whole have performed a variety of outreach activities, often using the SLRs as a vehicle for informing state and local vocational educators about the availability of Network resources. In this section, we describe the nature and effects of these linkage and outreach activities. Most of the information reported on linkages is derived from interviews with persons in other vocational education organizations. For outreach activities, this source is supplemented by data from the telephone interviews.

Linkages

MAVCC. One of the first linkages developed after the establishment of the Network was the creation of a new vocational organization, which has subsequently been closely aligned with one of the regional Centers. At the first Regional Meeting held by the Midwest Center, SLRs in that region's states became aware of the amount of duplication in curriculum development activities occurring across their states. They decided to pool their resources in order to eliminate duplication and spend their curriculum funds more efficiently. MAVCC was established in 1975 and has maintained close informal ties with the Network since that time. While the Network reportedly serves as a system for communicating national perspectives within the region, MAVCC focuses on developing curriculum materials for its member states.

According to MAVCC's Director, while there is no formal relationship between the consortium and the Midwest Center or the Network as a whole, operationally there are a number of connections. The fact that most of the consortium's state board

members are also their states' SLRs facilitates the flow of information regarding curriculum and other topics into MAVCC. The consortium often piggybacks meetings on Midwest or Northwest Regional Meetings, an arrangement which further promotes communication on development among and beyond member states.

MAVCC also uses the Network's information resources in its curriculum development activities. For new projects, consortium staff always conduct searches through the Midwest Center, and even if the searches do not uncover directly useful materials, some of the resulting references are appended to curriculum materials for use by local teachers as resource documents. The consortium has not needed to develop its own library because MAVCC curriculum developers use the Midwest Center's library.

The consortium also works with other regional Centers on curriculum-related activities. Consortium staff have provided inservice workshops under the auspices of the Northwest Center, and they recently worked with the East Central Network to develop an inventory of the distribution of MAVCC materials and provision of inservice to states in that region.

V-TECS. According to the Executive Director of V-TECS, while there is no formal relationship between the consortium and the Network, a substantial amount of sharing between the two organizations does occur. The V-TECS Director typically attends at least some of the Network's Regional Meetings each year, where he reports on current V-TECS activities. Additionally, one or more of the Centers work with V-TECS on special projects. For example, the East Central Center recently assisted V-TECS to

analyze options for changes in membership requirements and structures. Further, although in the past V-TECS did not routinely share V-TECS-produced materials with the Centers, in recent years this pattern has changed, and vocational educators now have access through the Centers to V-TECS materials for preview and as resources for curriculum development or adaptation. The V-TECS states also routinely access Network resources as a first step when they develop V-TECS materials. The fact that state V-TECS coordinators have also been SLRs has facilitated a sharing of knowledge and expertise across the two systems.

NCRVE. The Network has an ongoing, formalized relationship with NCRVE that in recent years has resulted in a number of joint projects and initiatives. Among the activities on which the two programs collaborate are the VECM database, ADVOCNET, dissemination of NCRVE materials through the SLRs, SLR training sessions at the annual Concurrent Meetings, and a number of outreach activities.

VECM, an automated curriculum materials system that includes abstracts of courseware as well as hard-copy materials, was conceived and initiated by the Center Directors as an efficient means for persons undertaking curriculum development, adoption or adaptation to scan available resources. It does not replace the libraries of the Centers and states because it does not provide copies of materials for preview or adoption, and it does not include commercially produced curriculum, but it facilitates identification of those materials likely to be most directly relevant to a particular need.

VECM is the joint responsibility of the Network and NCRVE. While the regional Centers vary somewhat in VECM procedures, in general SLRs are asked to complete abstracts on materials developed in their states. The Centers edit these abstracts and transmit them to NCRVE for entry into the system. The database is kept up to date because the regional Centers arrange for materials to be deleted as they become obsolete.

According to interviews conducted during the study, the use of VECM has increased in the last year or so. The database is accessed by private sector organizations, libraries, the military, and other organizations in addition to SLRs and regional Centers.

According to the NCRVE official in charge of VECM, the organization of the system as a joint Network/NCRVE activity is important to its operation. NCRVE manages the system, receiving, editing, and inputting abstracts as well as providing ongoing consultation and assistance to the field. The role of the Network is structured to minimize duplication in that each regional Center is responsible only for materials developed by states in the region. Because they have close relationships with the state and local vocational educators in their regions, primarily through the vehicle of the SLRs, the Centers are better able than NCRVE to facilitate the flow of materials into the system. Moreover, when gaps are identified, as in curriculum for special needs groups or vocational education courseware, the Centers can target these areas for special emphasis and ask the SLRs to canvass states for materials. Finally, an additional

benefit of the current VECM structure is that the state personnel who submit materials gain a sense of ownership of the system that seems to make them more likely to use it.

In addition to management of VECM, NCRVE is also responsible for managing ADVOCNET, the electronic mail system for vocational education. Currently all six regional Centers participate in the system and are assisting NCRVE in its attempts to enlist vocational educators throughout the country in the system by providing consultation and technical assistance on the system to SLRs.

Another joint initiative recently implemented between the Network and NCRVE has been an arrangement recommended by the Director of one of the regional Centers under which NCRVE's Dissemination and Utilization division share NCRVE materials with SLRs. Under this arrangment, NCRVE provides free materials to the Centers and participating SLRs, who then display the materials at conferences and workshops. NCRVE staff have developed a display notebook for SLR use that includes sections on Network and state materials as well as on NCRVE materials. This initiative is viewed as a two-way street: the activity helps NCRVE to reach state vocational educators who are part of their target audience, and SLRs' resources are expanded through receipt of materials developed at NCRVE.

In addition to such special projects as VECM, ADVOCNET, and the dissemination initiative, a number of other sharing activities routinely occur between the Network and NCRVE. NCRVE's officially designed Network liaison provides workshops for SLRs at the Network's Concurrent Meeting. NCRVE's biannual newsletter, Vocational Educator, has an "SLR Corner" that profiles

individual SLRs and describes activities of the Centers and SLRs. These and other cooperative activities are driven by the NCRVE perception of the Network and SLRs as an integral component of the nation's vocational education dissemination and utilization system.

Outreach

Effective outreach is an important ingredient in the Centers/Network's success in achieving its objectives. Among the vehicles for reaching potential users of Network services are the organizational linkages with other consortia and agencies. Thus, for example, NCRVE includes information about the Network in its own dissemination activities, with the result that both programs increase their capacity to reach their target audiences. (Similarly, the SLRs constitute an important resource for NCRVE as a mechanism for communication with the states.)

Another outreach vehicle used by the Network is the Regional Communiques that some Centers are contractually authorized to produce. Distribution of these and other informational materials on the Centers' services helps to inform state and local vocational educators of the types of resources the Centers have to offer. For example, some Centers have printed brochures announcing their services, although such documents cannot be produced under the federal contract.

The SLRs are probably the single most important outreach mechanism for marketing Network services. They communicate word about the Centers/Network through displays at conferences,

presentations at workshops, and other mechanisms. As shown in Table II-3, local and statewide meetings and workshops are the avenues SLRs most frequently use to inform their constituents about Network resources. Results of our telephone survey of users of the Network indicated a high level of awareness of the regional Centers, with 88 percent of all respondents knowing specifically of their regional Center. (This finding exceeds the expectations of Center Directors, who tended to think users would

Table II-3

Mechanisms Used by SLRs in Performing Outreach to State and Local Users

Type of Outreach	Number of SLRs*
Local meetings/workshops	12
State-wide conferences/meetings	7
CCC brochures	8
State publication	6
Through use of state lab/center	4
Regional communique	1
Association meetings	1

know their SLRs by name but might not be familiar with the Centers or the Network.) As data reported in Table II-4 show, the SLR was the single most frequently mentioned source of awareness of the Centers. Further, personal contacts appear to be a more useful outreach mechanism than publications, a finding that emphasizes the centrality of the networking function to the program's effectiveness.

* More than one response was provided by some SLRs.

Table II-4

Means of User Awareness of the Centers

	Local (n = 23)	State (n = 27)	T.E. (n = 14)	Total (n = 64)
Means of Awareness				
Through SLR	4	12	1	17 (27%)
State lab/center	1	2	1	4 (6%)
State publications	3	1	3	7 (11%)
State position	2	9	2	13 (20%)
Presentations/meetings	3	1	-	4 (6%)
Through someone other than SLR	6	1	-	7 (11%)
Directly through Center	-	1	1	2 (3%)
Do not recall	4	-	6	10 (16%)

Information presented in Table II-5 indicates the target groups addressed by SLR outreach activities, showing that local administrators and teachers are most frequently assigned the highest priority for SLR outreach activities. Other frequently mentioned targets of SLR outreach activities include state personnel and postsecondary institutions. The priority assigned to postsecondary vocational educators may reflect a response to a criticism that in the past the Network has been less successful in reaching postsecondary vocational educators than those involved in secondary vocational education. Interviews with regional Center Directors, officials of the various consortia and NCRVE, and others identified postsecondary vocational education as an area that needs concentrated outreach by the Network.

Table II-5

SLR Outreach Priorities by User Categories

User Categories	Priority Rankings* 1	2	3	4	Total
LEAs	9	4	2	-	15
SEAs	6	7	2	-	15
Postsecondary	7	5	1	1	14
Industry	-	2	1	-	3

Finally, while our data collection activities indicated a high level of awareness of the Network among the various respondent groups, including State Directors of Vocational Education, state and local vocational educators, and teacher educators, the continuing need for effective outreach is demonstrated by the fact that 28 percent of telephone interview respondents, asked an open-ended question regarding recommendations for improvement of the program, specified increased outreach initiatives as their main recommendation. This finding suggests that, while current users of the Network's services are convinced of the utility of the services they receive, there is a widespread perception that some vocational educators, particularly at the postsecondary and local levels, need more information about the Network in order to access its resources effectively.

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* Some SLRs assigned the same priority ranking to more than one user category - 2 SLRs ranked first three categories as receiving equal priority.

Summary of Findings

In general, the Network was reported to have affected vocational education curriculum activities at two levels. For state departments of vocational education, the Network has been extensively used and has had the effect of stimulating a level of cummunications among states that simply did not exist prior to the program's inception. At the local level, teachers have accessed Center-provided materials through their state labs and centers. These two channels were cited as having had a number of impacts, including:

- Direct and indirect reduction of duplication in curriculum activities through stimulating communication across the country
- An increase in capacity in curriculum through serving as a vehicle for inservice training on curriculum, both indirectly through the SLRs, who receive inservice and then disseminate new knowledge through their states, and directly to local vocational educators through training in CBVE, curriculum development strategies, skills training in computerized databases, electronic mail, and other areas
- Improvement in the overall quality of vocational education curriculum through helping people to become better informed regarding the range of materials available and to learn how to evaluate curriculum materials

Variability in perceptions about the program's effectiveness hinges to some extent on states' expectations about their regional Centers. At the same time, the key to the Network's effectiveness is the flexibility of the regional Centers in responding to the varied needs of individual states in their regions. While the Centers can fill a broad role in vocational curriculum activities, to be effective they must continue to

address the individual needs of the states within their regions. So it is critical that the states not get "defined out" of the program as increasing emphasis is placed on national priorities and needs.

The Centers have facilitated the spread of competency-based vocational education through promotion of this method in curriculum development, adoption, and adaptation. The wider availability of curriculum materials has reportedly improved the overall quality of vocational curriculum, although the program could have done more in this regard through some mechanism for endorsing the highest quality materials that are produced.

Perhaps the most important benefit of the program has been the creation of a network that brings people together to learn from each other, take ideas and materials back to their states, and thus reduce duplication of effort in curriculum activities. In this context, the Regional Meetings have been a welcomed forum for sharing of ideas and materials. At another level, one of the frequently overlooked benefits of the program has been the informal spread of expertise and resources through the movement of vocational education professionals around the country. As people move from one position to another within or across states, they carry with them the capacity and resources acquired through involvement with the Network, primarily as SLRs. Again, this spread of advocacy for the Network has increased the extent to which Network objectives have been accomplished. The continued focus of the program should revolve around these activities: collection, housing, cataloguing, and disseminating the latest

curriculum materials from throughout the country; and concentrating on the networking relationships that facilitate sharing of materials, information, and expertise. The role of the Centers as a resource link is central, and because of limited resources, the Centers should concentrate on activities related to this role rather than attempting to "be too many things to too many people."

III. CONCLUSIONS AND RECOMMENDATIONS

As documented in the preceding chapter, the findings of this study suggest the Centers and Network are successfully achieving their objectives in the areas of increased availability of curriculum information and materials, reduced duplication of curriculum activities through promotion of adoption and adaptation, improved curriculum and dissemination services to state and local vocational educators, and linkages with other vocational education organizations. In this chapter we provide some conclusions about the program that emerge from the study's findings. Additionally, a number of recommendations for consideration by the Centers and by OVAE in the context of planning for the program's future direction are presented.

Conclusions

At the most fundamental level, a major objective of federal officials in establishing the National Network for Curriculum Coordination in Vocational and Technical Education was to create a structure through which curriculum materials and resources would be readily available to vocational education practitioners--curriculum developers, teachers, and others who need such resources. At this level the six regional Centers were intended to serve as resource libraries where materials could be accumulated and then distributed to persons engaged in curriculum-related activities throughout the country. The findings of this study suggest that this program purpose has been accomplished.

There is a high level of consensus among study respondents that the ready availability of materials at the Centers has enabled states to save time and money in their curriculum-related activities, as well as to reduce duplication of effort in developing, adopting, or adapting materials for use in vocational education instructional activities. As one example of this impact, two of the major curriculum consortia, V-TECS and MAVCC, both reported using Center resources in the curriculum development activities conducted by consortium members or staff.

Further, the availability of this resource has apparently had some influence on decisions in a number of our sample states to reduce developmental efforts and move in the direction of adoption and adaptation strategies where possible. Although other factors have clearly entered into such decisions (e.g., declines in resources available for curriculum and other program improvement activities, rapidly changing industrial conditions), the availability of the resource libraries has enabled states to look to curriculum development as an area where economies can be achieved.

In addition to the resource library function of the Centers themselves, the Network's strategy of encouraging states to share sufficient materials for distribution to all SLRs has created a pool of curriculum resources and materials in the states. (It should be noted that these materials have been contributed by the developing states and thus have not imposed an added cost on the program.) Some states have recently begun to share materials in this way, although others have curtailed the number of copies of

materials they provide. The Center directors have continued to encourage states in their regions to share resources within constraints of state policies and practices.

A number of respondents described a continuing and even accelerating need for the Network's information resources capacity in the future. Specific factors cited as dictating the continuing need for the program include state mandates for competency-based approaches to instruction, state-level educational reform acts, and state economic development initiatives designed to attract high-technology industry. More generally, rapid industrial and technological changes are straining states' capacity to keep up with new curriculum needs, and one State Director mentioned that the Network will have an important role in taking vocational education into the 21st century. Finally, the current nationwide emphasis on educational excellence suggests a continuing need for the types of resources the Network helps to make available to the states. In this regard, it should be noted that accumulation and dissemination of curriculum materials is a continuing process--that is, the production of curriculum and instructional material is not time limited and this need for the information resources through the Network is ongoing.

While there is considerable variability in the activities and foci of the individual Centers, they are all repositories and disseminators of curriculum and instructional materials and serve as a linking agent to materials available in other states, at vocational education organizations, and in the national curriculum database. Many of the persons interviewed for this study

reported a perception that with these activities the program meets an important, ongoing need in vocational education.

Beyond materials availability, perhaps the chief benefit of the Network documented by this study is the creation of what one respondent, who has worked with the Network for many years, termed "an intensive and highly capacitated communications network" across the nation. This communications network encompasses the Centers and the current and former state-level SLRs. As the data reported in earlier sections of this report suggest, this communications network is extensively accessed not only by the Centers and persons working directly in activities related to curriculum and instruction but also by other vocational education improvement organizations.

A high proportion of the federal resources available to the program has been devoted to the establishment and maintenance of this nationwide network. National and Regional Meetings, technical assistance and consultation, Regional Communiques and electronic mail have been used to create a climate in which there can exist in each state a locus of activity for interstate and intrastate sharing of knowledge and materials on vocational education curriculum. According to nearly all of our study respondents, this network operates efficiently and effectively. SLRs routinely communicate with each other, with their regional and other Centers in the Network, and with other resource organizations to locate the resources needed by vocational educators in their states.

The federal investment in the program has leveraged a considerable amount of state support. All but one of the Centers receive support from the states in which they are located, and several Centers receive substantial state funding for staff, materials, and activities, expanding their capacity to provide services to their own state and other states within and beyond their regions. Further, all states and territories contribute to the Network by donating the time of the SLRs to attend to the Network's business. Finally, many of the states that expend considerable resources in curriculum development share their products with the Network, thus enabling states with lower resource levels to obtain materials that would otherwise be unavailable to them. One of the study's respondents, the director of a curriculum consortium, commented regarding the leveraging of resources, that "if you could document it, the federal investment has been some of the best money spent in vocational education."

Recommendations

Our data collection and analysis uncovered several areas in which the regional Centers, the Directors' Council, or OVAE might consider adjustments to the program that could enhance its effectiveness. Such adjustments are offered for consideration in the context of a program that appears to be operating largely as intended. The recommendations fall into two categories: (1) actions that might be implemented by the Centers or Network

through the Directors' Council and (2) actions that might be undertaken by OVAE in its management of the program.

Evaluation of curriculum. The existence of the Network over the past decade and a half is generally thought to have improved the quality of vocational education curriculum. The perception is that increased exposure to curricular and instructional materials and technical assistance in curriculum development and applications have increased the capacity of practitioners to recognize and select high quality materials. It might be possible for the Network to do more, however. While the essentially voluntary nature of the Network is thought by many to prevent the Centers from evaluating the materials they obtain from the states, several respondents recommended that the Network undertake some sort of curriculum evaluation. One suggestion that might be feasible within the context of state sharing of materials is a review procedure that would not exclude materials from the resource base but would provide endorsements of materials that met certain standards of quality (e.g., materials that had undergone field testing and validation).

Outreach. A second observation about which there was consensus among study respondents was the need for increased outreach. While the Centers are limited in their outreach activities by printing restrictions, SLRs could be encouraged to perform more outreach activities, perhaps through state publications. The Centers might want to provide training in outreach strategies in their Regional Meetings and add a section on outreach to the training package used with new SLRs. Additionally,

a number of respondents recommended targeting of outreach to groups that have in the past underutilized Network resources, particularly postsecondary vocational education institutions.

Joint meetings. The Regional Meetings are generally viewed as an extremely important forum for information sharing and capacity building among SLRs. While the annual Concurrent Meeting was reported by some respondents to be too large to permit some of the most useful sharing and capacity-building activities that occur at Regional Meetings, one problem mentioned concerning Regional Meetings is that sometimes they are less effective than they might be, particularly for the smaller regions when some SLRs are unable to attend. In part for this reason, and in part because persons who have attended some of the recent joint meetings have been very enthusiastic about what they have learned about activities in other regions, one alternative might be an increase in the use of joint meetings. For example, Centers might co-sponsor a Regional Meeting every other year on some type of rotating basis.

Selection of SLRs. SLRs are appointed by their State Directors of Vocational Education, and the time they spend on Network activities is donated by their states. In general, this practice appears to have worked well. At the same time, the importance of the SLRs to the effectiveness of the program, along with such recent program developments as the advent of VECM and electronic mail, suggests the appropriateness of the Center Directors' involvement in the selection process. For example, the Directors' Council might develop a listing of Network activities that

affect SLR responsibilities and time commitments for review by State Directors as they make their appointments.

Impact reporting. As currently structured, the Center impact reports provide a wealth of historical information, process data, and impact information keyed to both state and Center activities (see Appendix D for an analysis of the current system). To provide a clearer picture of the impacts of the Centers and states in their regions in accomplishing program objectives, a critique and revision of the impact reporting system by the Directors' Council might be useful. Such an activity might focus on distinguishing between the Centers/ Network's management information needs and the types of measures that pertain more specifically to Center and Network impacts. Among the revisions the Council might consider are the following:

(1) Ensuring uniform interpretation of the meaning of individual impact measures and consistency in methods used to calculate the numbers reported.

(2) Separating noncomparable activities now included under a single "result area," such as "Items disseminated," which may include outreach materials in addition to curriculum-related materials, thereby confounding analysis of Center impacts in specific areas.

(3) Distinguishing between activities and impacts of the Center and those of SLRs, now lumped together in several measures such as number of inservice workshops held.

(4) Requiring all Centers to provide impact data on a state-by-state basis, in order to facilitate assessment of the effects individual states have on overall regional patterns of activity.

(5) Deleting several static measures from the impact reports, particularly those relating to the presence of state systems for vocational education curriculum, such as library loan systems, and

those relating to standard SLR functions such as attendance at regional meetings and maintenance of communications with related state staff.

(6) Incorporating into the reports several new measures designed to assess the degree to which various technology-based improvement efforts are being implemented, such as use of ADVOCNET by client states, states performing their own VECM searches, and percent or number of Center materials accessible on-line.

Consideration of these and any other improvements to impact reporting must be done with the understanding that SLRs provide state-related data to the Centers on a voluntary basis. Centers are therefore limited in their ability to prescribe data collection or analysis.

In addition to adjustments that might be undertaken by the regional Centers, several recommendations emerged concerning OVAE's management of the Network. These pertain to budgetary planning, concentration in emerging areas, and reconsideration of the current regional configuration of the Centers.

Budgetary planning. Federal management of the Network is constrained by the program's discretionary nature. In years when fewer resources are available, some activities are deleted from Center budgets. Among the activities that are typically used to adjust budgets to available resources are technical assistance, Regional Meetings, and Regional Communiques, presumably because each is a discrete activity that can be added or deleted without implications for overall Center operations.

While the fluctuations in federal funding may be unavoidable, longer range strategies might be considered as a way to alleviate the operational problems caused for the Centers. For

example, currently the Western Center, which has relatively more communication problems than other Centers because of the large geographical area it serves, does not have funding for a Regional Communique. Additionally, since nearly all study respondents cited the Regional Meetings as the single most useful Network activity in terms of information sharing and capacity building, alternatives for cost savings other than reduction in the number of Regional Meetings should probably be identified.

Concentration in emerging areas. The areas of information resources cited as needing more attention by the Network are such emerging areas as curriculum for high technology fields (e.g., robotics and computer-assisted design and machining) and instructional software. Given the rapid changes in these fields and the expense associated with them, each Center might take one emerging area as a special concentration in addition to the current library services offered by all Centers. This strategy would provide the nation with a specified place for obtaining needed materials in each high-cost area of concentration.

Such an arrangement would likely require a somewhat more formal role for the Directors' Council because greater coordination would be required in the decisionmaking process. However, the benefits might justify whatever minor changes would be required.

Changes in the regional configuration of the Centers. A number of respondents had recommendations concerning the current regional configuration of the Centers. While the regional structure of the program appears to be one of the factors that

has contributed to its success, particularly in establishing communications and rapport among SLRs, some respondents pointed to specific variations among states within regions that affect the utility of some of the information sharing that occurs. Some states are unlike the rest of their regions in such important characteristics as industrial profiles, availability of resources for vocational education, and demographic/geographic characteristics (particularly in the case of states that are large but sparsely populated and have relatively low resource levels). At the same time, in general the SLRs interviewed in the study reported a high regional affiliation, and thus the current regional configuration may be the most appropriate one.

Summary. Although the effectiveness of the program constitutes an argument against major changes at the Center or federal level, the Network is a mature program, having been in place since 1972. Given current and expected changes in national industrial and employment patterns, it may be useful for program managers and operators to think about where the program has been and whether some new directions might be usefully considered. It is clear that vocational educators who provided information for this study see a continuing need for the program, and it is within this context that consideration of possible future directions may be appropriate.

APPENDICES

A. Regions, States Served, and Organizations Operating Each Center

B. Tabulations of Selected Items from Interviews with SLRs

C. Tabulations of Selected Items from Interviews with State and Local Users

D. Impact Reporting

APPENDIX A

REGIONS, STATES SERVED, AND ORGANIZATIONS OPERATING EACH CENTER

1.	Northeast Region	Connecticut, Maine, Massachusetts, New Hampshire, New Jersey New York, Puerto Rico, Rhode Island, Vermont,	New Jersey State Department of Education, Old Bridge, NJ
2.	Southeast Region	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee	Mississippi State University, Starkville, MS
3.	Midwest Region	Arkansas, Iowa, Kansas, Louisiana, Missouri, Nebraska, New Mexico, Oklahoma, Texas	Oklahoma State Department of Vocational and Technical Education, Stillwater, OK
4.	East Central Region	Delaware, District of Columbia, Illinois, Indiana, Maryland, Michigan, Minnesota, Ohio, Pennsylvania, Virginia, West Virginia, Wisconsin	Illinois State Board of Education Springfield, IL
5.	Northwestern Region	Alaska, Colorado, Idaho, Montana, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming	Northwest Futures, Olympia, WA
6.	Western Region	American Samoa, Arizona, California, Commonwealth of the Northern Marianas, Guam, Hawaii, Nevada, Trust Territory of the Pacific Islands	University of Hawaii, Honolulu, HI

APPENDICES B AND C

SELECTED DATA TABULATIONS

Tabulations of responses for selected items from the SLR and state and local user interviews are provided in Appendices B and C, respectively. Simple counts have been used to express response frequencies in the SLR tables, since percentages based upon such a small number of respondents (15) would be misleading. Response frequencies for the state and local user interviews are provided by category of user. User categories and the total number of respondents in each category are as follows:

User Categories	No. of Respondents
Local-level users	30
State-level users	29
Teacher educator (T.E.)	14
Total	73

Response frequencies across all categories of users are expressed both as a count and as a percentage of the total number of respondents.

These frequency distributions are intended merely to elucidate relevant portions of the text and to provide the reader with some sense of how users responded to specific interview items. For many of the tables we collapsed similar or closely-related responses into a single category in order to develop a broad perspective of user perceptions about the Network and its services. Explanatory notes to facilitate understanding of the data are provided where necessary.

APPENDIX B

TABULATIONS OF SELECTED ITEMS FROM INTERVIEWS WITH SLRS

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Table B-1

SLRs' State Responsibilities (n = 15)

State Responsibilities	Number of SLRs*
Curriculum or program development/coordination	13
Staff development	6
Materials dissemination	5
Program evaluation	7
Program improvement/exemplary programs	6
Other	4

* More than one response was provided by some SLRs.

Table B-2

Configuration of Curriculum Resources
in Sample States

Number of States with Curriculum Lab or Resource Center, (n = 15)

	Lab (n = 5)	Resource Center (n = 14)*
Years in Operation		
1-3 yrs.	-	2
4-7 yrs.	1	3
8-11 yrs.	2	5
12-15 yrs.	-	1
15+ yrs.	2	2
Do not know	-	1
Staffing Level		
0-5 FTES**	1	9
6-10 FTES	3	3
11-15 FTES	-	1
16-20 FTES	1	-
21+ FTES	-	1

* 3 of 14 serve as both curriculum lab and resource center.

** Full-time equivalent.

Table B-3

SLRs' Ranking of Sources Accessed in Meeting State Needs For Curriculum Materials (n = 15)

	Ranking*					
Sources	1	2	3	4	5	Total
State lab/center	7	-	-	-	-	7
Regional CCC	5	6	-	2	-	13
Consortium	2	1	1	1	-	5
Another CCC	-	1	1	-	-	2
NCRVE	-	-	1	-	1	2
Another state/SLR	-	3	-	-	-	3
Other	1	1	1	-	-	3

* Some SLRs cited fewer than 5 sources.

Table B-4

Mechanisms in Place in Sample States for Obtaining Curriculum Resources

Flow of State and Local Requests for Information From Regional CCCs, (n = 14)

Requests made directly to Centers	11
Requests routinely channeled through SLRs	3

Channels Used by SLRs to Obtain Information (n = 15)

	Contacts Other Regional CCCs	Contacts Other SLRs
Yes	9	13
No	6	2

Reasons Cited for Contacting Other CCCs, SLRS*

	CCCs (n = 9)	SLRs (n = 13)
To obtain materials	8	6
To obtain information	6	10
Other	2	2

* More than one response was provided by some SLRs.

Table B-5

Uses of Computer Communications Capability by Sample States

Number of States with Computer Capacity for VECM/ADVOCNET, (n = 15)	
Yes	15
No	-

Mechanisms Used for Performing VECM Searches, (n = 15)	
SLR	3
CCC	9
NCRVE	2
Nonresponse	1

Reasons Cited for Requesting Searches by CCC/NCRVE, (n = 11)*	
Staff not trained	3
Takes too much time	3
Terminal access a problem	2
Too expensive	2
Recently acquired capacity	2
Other	2

Reasons Cited for Participating in ADVOCNET (n = 15)	
Time savings/efficiency	7
General utility	5
Cost savings	1
State mandated	1
Not participating	1

* More than one response was provided by some SLRs.

Table B-6

Mechanisms Used by SLRs in Performing Outreach to State and Local Users

Type of Outreach	Number of SLRs*
Local meetings/workshops	12
State-wide conferences/meetings	7
CCC brochures	8
State publication	6
Through use of state lab/center	4
Regional communique	1
Association meetings	1

* More than one response was provided by some SLRs.

Table B-7

SLR Outreach Priorities by User Categories (n = 15)

User Categories	Priority Rankings* 1	2	3	4	Total
LEA	9	4	2	-	15
SEA	6	7	2	-	15
Postsecondary	7	5	1	1	14
Industry	-	2	1	-	3

* Some SLRs assigned the same priority ranking to more than one user category - 2 SLRs ranked first three categories as receiving equal priority.

Table B-8

SLR Reports of the Utility of Network Involvement (n = 15)

Nature of* Benefit	Number of SLRs
Professional development	14
State job effectiveness	15

Reasons Cited for Utility of Network Involvment**

	Professional Development (n = 14)	State Job Effectiveness (n = 15)
Increased awareness	11	14
Increased interaction with other vocational educators	7	3
Other	3	3

* Closed ended questions asked SLRs directly whether their SLR experiences had produced either of these two specific benefits.

** More than one reason was provided by some SLRs.

Table B-9

SLR Perceptions Concerning State Use of Center Resources

Extent of State Use, (n = 15)	
Optimal state use	5
Less than optimal state use	10

Reasons Cited for Less Than Optimal Use (n = 10)*	
Insufficient time	5
Insufficient awareness of Center in state	4
Other Centers more useful	2
Other	4

* More than one reason was provided by some SLRs.

Table B-10

SLR Perceptions Concerning Network Impacts on Quality of State Vocational Education Curriculum (n = 15)

Nature of Improvement*	
Increased pool of available materials	8
Sharing of ideas/information	4
Increased utilization of existing materials	4
Increased state capacities through technical assistance	2
Improved curriculum development generally	2
Other	2
Has not improved as result of Center	1

* More than one improvement was cited by some SLRs.

Table B-11

SLR Reports of Technical Assistance or Consultation Received From the Centers (n = 15)

Areas of TA/Consultation Received*	
High tech occupations curriculum (e.g., robotics)	2
Competency-based curriculum	2
General curriculum development	2
Traditional occupational area curriculum	2
Career exploration program	1
Nonresponse	2
No technical assistance/consultation received	6

* More than one area was cited by some SLRs.

Table B-12

SLR Perceptions Concerning Network Impacts on Reduced Duplication and Costs for Vocational Education Curriculum (n = 15)

Impact Areas	SLRs Reporting
Reduced duplication	15
Reduced costs	12
Means of Achieving Reduced Costs, (n = 12)*	
Saved development costs	9
Saved staff time	2
Previewing of materials	2
Generally more efficient	2
Reasons Cited for Lack of Reduced Costs, (n = 3)	
Would not develop anyway	1
Can not attribute savings to Center alone	1
Nonresponse	1

* More than one response was provided by some SLRs.

Table B-13

Areas Cited by SLRs as Needing Increased Resources

Areas Needing Increased Resources (n = 15)*		
BETTER COVERAGE OF OCCUPATIONAL AREAS	10	
High tech. occupations		8
Marine occupations		1
Hotel/motel		1
Industrial arts		1
Textiles		1
Shoe manufacturing		1
Electronics		1
BETTER COVERAGE OF SPECIAL NEEDS POPULATIONS	4	
Handicapped		1
Asian language		1
Limited-English-proficient		1
Single head of household		1

* More than one response was provided by some SLRs.

Table B-14

SLR Recommendations for Improvement of the Centers/Network (n = 15)

Recommendations	Number of SLRs
FEDERAL ADMINISTRATION	9
Increased funding for Centers	3
Improved continuity from one contract period to the next	2
Improved consistency across Centers, functionally	1
Reduced administrative reporting	1
Realign regions according to state similarities	1
Improve regional/national coordination among Centers	1
CENTER MANAGEMENT AND OPERATIONS	7
Increased use of computers	3
Screen incoming materials for quality	1
Disseminate copies of all materials to all states	1
Involve more people in regional meetings	1
More concentration on library services	1
STATE PARTICIPATION	5
Increase number of states providing materials to Centers	3
Increased support from State Directors	2
NO RECOMMENDATIONS - SATISFIED AS IS	2

APPENDIX C

TABULATIONS OF SELECTED ITEMS FROM INTERVIEWS WITH STATE AND LOCAL USERS

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Table C-1

State and Local User Awareness of Centers/Network

	Local (n = 30)	State (n = 29)	T.E. (n = 14)	Total (n = 73)
Extent of User Awareness				
Knows of Center	23	27	14	64 (88%)
Knows SLR only	7	2	-	9 (12%)
Means of Awareness				
	Local (n = 23)	State (n = 27)	T.E. (n = 14)	Total (n = 64)
Through SLR	4	12	1	17 (27%)
State lab/center	1	2	1	4 (6%)
State publications	3	1	3	7 (11%)
State position	2	9	2	13 (20%)
Presentations/meetings	3	1	-	4 (6%)
Through someone other than SLR	6	1	-	7 (11%)
Directly through Center	-	1	1	2 (3%)
Do not recall	4	-	6	10 (16%)
User Procedures for Contacting Centers				
	Local (n = 30)	State (n = 28)	T.E. (n = 14)	Total (n = 72)
Contacts Center directly	14	11	9	34 (47%)
Requests channeled through SLR	16	17	5	38 (53%)

Table C-2

State and Local Use of Center-Provided Materials

Receipt of Center-Provided Materials

	Local (n = 30)	State (n = 29)	T.E. (n = 14)	Total (n = 73)
Have received materials	30	27	14	71 (97%)
Have not received materials	-	2	-	2 (3%)

Types of Materials Received*

	Local (n = 30)	State (n = 27)	T.E. (n = 14)	Total (n = 71)
General curriculum and instructional materials	27	27	14	68 (96%)
Audio visual materials	5	1	1	7 (10%)
Research/evaluation materials	2	1	-	3 (4%)

* More than one response was provided by some respondents.

Table C-2 (continued)

State and Local Use of Center-Provided Materials

	Uses of Materials Received*			
	Local (n = 30)	State (n = 27)	T.E. (n = 14)	Total (n = 91)
MATERIALS PREPARATION	19	14	3	36 (51%)
Curriculum development	8	5	3	16
Reference guide	7	4	-	11
Program development	4	4	-	8
Task lists/analyses	-	1	-	1
FLOW THROUGH	7	12	4	23 (32%)
Distributed to students	-	-	2	2
Distributed to teachers	6	10	2	18
Distributed to school district	1	1	-	2
Distributed to state specialist	-	1	-	1
TRAINING/INSTRUCTION	7	6	10	23 (32%)
Instruction	5	2	10	17
Staff development	2	2	-	4
Personal development	-	2	-	2
OTHER	1	3	3	7 (10%)
Proposals	-	1	-	1
Policy development	-	2	-	2
Supplemental information	1	-	-	1
Research	-	-	3	3

* More than one response was provided by some respondents.

Table C-3

State and Local User Perceptions Concerning the Utility and Quality of Materials Received

	Utility of Materials Received			
	Local (n = 30)	State (n = 27)	T.E. (n = 14)	Total (n = 71)
Very useful	16	16	7	39 (55%)
Generally useful	9	7	4	20 (28%)
Utility varies	4	2	2	8 (11%)
Can not say	1	3	1	5 (7%)

	Quality of Materials Received			
	Local (n = 30)	State (n = 27)	T.E. (n = 14)	Total (n = 71)
High quality	27	22	13	62 (87%)
Quality varies	1	3	1	5 (7%)
Not high quality	1	-	-	1 (1%)
Can not say	1	2	-	3 (4%)

Table C-4

State and Local User Alternatives to Center-Provided Materials

	Local (n = 30)	State (n = 27)	T.E. (n = 14)	Total (n = 71)
Alternative Courses of Action				
Look elsewhere	18	16	12	46 (65%)
Develop	8	6	1	15 (21%)
Do without	4	4	-	8 (11%)
Do not know	-	1	1	2 (3%)
Alternative Sources of Curriculum Materials*				
State dept/lab/center	7	3	3	13 (18%)
Local school system	2	1	1	4 (6%)
Other states	7	7	3	17 (24%)
NCRVE	5	4	1	10 (14%)
Colleges/universities	5	4	3	12 (17%)
Other CCCs	-	1	1	2 (3%)
Private organizations*	4	4	2	10 (14%)
Database (e.g., ERIC)	8	4	1	13 (18%)
Catalogs	1	1	-	2 (3%)
Consortia	8	4	4	16 (23%)
Other	-	2	5	7 (10%)
None	4	2	1	7 (10%)

* More than one source was cited by some respondents.

Table C-5

State and Local User Receipt of Curriculum Related Services

	Local (n = 30)	State (n = 28)	T.E. (n = 14)	Total (n = 72)
Receipt of Curriculum Related Services				
Have received services	18	15	7	40 (56%)
Have not received services	12	13	7	32 (44%)
Types of Services Received*				
	Local (n = 30)	State (n = 29)	T.E. (n = 14)	Total (n = 73)
Materials search	9	7	3	19 (48%)
Inservice/tech. asst./ consultation	11	7	3	21 (53%)
Conference/presentation	1	3	1	5 (13%)
Orientation/familiarization visit	-	-	1	1 (3%)

* More than one type of service was received by some respondents.

Table C-6

State and Local User Reports of the Utility of Curriculum Related Services

	Utility of Curriculum Related Services*			
	Local (n = 18)	State (n = 15)	T.E. (n = 7)	Total (n = 40)
Savings of time/effort/ money	10	12	4	26 (65%)
Improved curriculum development	5	2	1	8 (20%)
Increased awareness	7	6	-	13 (33%)
Staff development	6	2	1	9 (23%)
Facilitates planning	2	1	-	3 (8%)
Other	-	-	3	3 (8%)
Was not useful	1	-	-	1 (3%)

* More than one response was provided by some respondents.

Table C-7

State and Local User Alternatives for Curriculum Related Services

Alternative Sources for Curriculum Related Services*	Local (n = 18)	State (n = 15)	T.E. (n = 7)	Total (n = 40)
State department	4	1	-	5 (13%)
Other states	-	3	-	3 (8%)
Consortia	1	1	-	2 (5%)
NCRVE	-	4	-	4 (1%)
Colleges/universities	3	-	3	6 (15%)
Database (e.g., ERIC)	2	3	2	7 (18%)
Private organization	2	1	2	5 (13%)
Trade/prof. association	-	1	-	1 (1%)
Other	-	3	-	3 (8%)
No other source available**	6	4	1	11 (28%)

* More than one source was cited by some respondents.

** Technical assistance or presentations are services referenced by 8 of the 11 respondents citing no alternative sources.

Table C-8

State and Local User Recommendations for Improvement of Centers/Network

Recommendations	Local (n = 30)	State (n = 29)	T.E. (n = 14)	Total (n = 73)
ORGANIZATIONAL/STRUCTURAL	1	5	1	7 (10%)
Realign regions by state similarities	-	2	-	2
More staff at Centers	1	-	-	1
Clearer definition of Center role	-	2	-	2
Move Center to another state	-	1	1	2
STATE PARTICIPATION	12	5	4	21 (29%)
Increase state outreach	12	4	4	20
Increase state materials sharing	-	1	-	1
CONTENT OF MATERIALS	2	3	3	8 (11%)
More high tech	1	-	-	1
More adult education	-	-	1	1
More Hispanic/LEP	-	-	1	1
More leadership	-	-	1	1
More current materials	1	3	-	4
FORMAT OF MATERIALS	1	2	2	5 (7%)
More sophisticated	-	1	-	1
More CBVE emphasis	-	1	-	1
Briefer materials	-	-	1	1
More slides	-	-	1	1

Table C-8 (continued)

State and Local User Recommendations for Improvement of Centers/Network

Recommendations	Local (n = 30)	State (n = 29)	T.E. (n = 14)	Total (n = 73)
AVAILABILITY OF MATERIALS	8	3	3	14 (19%)
More materials generally	1	-	-	1
Increase use of catalogs	1	1	1	3
Have all materials accessible via computer	-	-	1	1
Easier access to materials	3	2	1	6
More V-TECS materials	1	-	-	1
More copies of materials	2	-	-	2
SERVICES	4	3	1	8 (11%)
More workshops/inservice	1	2	1	4
Regional meetings of users	1	-	-	1
Increase use of electronic mail	1	-	-	1
Coordinate public/private curriculum development	1	1	-	2
NO RECOMMENDATIONS	8	9	5	22 (30%)

APPENDIX D

IMPACT REPORTING

Center Directors are required to provide OVAE with periodic progress reports and annual summary impact reports. Key items from the six Centers' impact reports are aggregated by OVAE for use in the annual Network-wide Curriculum Coordination Center Impact Report. The content of the Centers' impact reports, specifically the standard data items that are used and the standardized formulas for estimating the value of certain activities, are prescribed by the Directors' Council.

Impact reporting currently is based on 32 data items or "key results areas" organized under three functional headings: (1) coordination and management, (2) curriculum services, and (3) dissemination and utilization. SLRs voluntarily report to their Centers on the subset of items that pertain to state-level activity, and Center Directors compile these reports and incorporate data reflecting Center-level activity.

One of the tasks of our study was reanalysis of Center reported impact data as one source of evaluative information. In performing this task we encountered several obstacles, including the following:

- Not all Centers report information to OVAE on a state-by-state basis. For this reason, the impact data could not be used to interpret the effects individual states have on overall regional activity or to corroborate the perceptual data obtained during interviews. While this factor does not necessarily have implications for routine program monitoring, it did complicate attempts to verify information from the various data sources used in the study.

- Measures of Center activities are (or at least appear to be) merged with measures of SLR activities for selected items. Thus it is not possible to use the data to assess the effectiveness of Center-level management of federal funds. The data are further confounded by the variation in job responsibilities of individual SLRs. An example of this problem is found in the measures "Inservice workshops and attendees," which aggregate workshops conducted or involving either Center staff or SLRs. For purposes of understanding the federal program and the role of SLRs, it would have been useful to have these reported separately.

- Terms appear to be interpreted differently across states and regions. This lack of consistency brings the validity of the data into question. Users of the data are uncertain as to what is intended to be measured and whether what is being measured is what was intended to be measured. An example of this problem is the data item "Persons reached through dissemination," where dissemination could be variably interpreted as providing materials or describing the Network at a conference.

- Items combine noncomparable types of activities. Thus it is difficult to draw inferences from the data item as to what was accomplished. Examples of this problem include "Items disseminated," which can include outreach materials as well as actual curriculum materials and "Dollars saved and cost benefits of the Network" which collapses dollars not expended as a result of adoption/adaptation with costs incurred through participation in Network activities.

Reporting in several of the key result areas is affected by more than one of these discrepancies.

The impact reporting system has evolved over time, with additional measures added as the Network became involved in new activities and new issues came to be of interest. This pattern is indicative of a flexible management system and one that is not stagnant. However, it appears that adjustments to the system have primarily been in the direction of additions and that key

results areas have not been deleted as they have become less relevant and the measures may have lost their significance.

Prime examples of measures having little significance in terms of conveying annual Network impacts are those pertaining to the presence of state systems for vocational education curriculum (e.g., library loan systems, dissemination systems, systematic review of materials) and those related to various SLR activities (e.g., participation in Regional Meetings, "systematic communication" with other state staff). For several years now each of the Centers has reported the maximum or near maximum number possible for these types of measures. State systems are established and over the course of the Network's existence, the SLR role has been defined and solidified. While certainly evidence of the Network's historic impact is important, those "result areas" relating to the presence of certain state systems no longer contribute to a picture of annual impacts or improvement. Similarly, measures of SLR functions or activities, while important management concerns, do not provide any insight from an impact or outcome perspective.

The impact reporting system as it currently exists has some attributes of a management system and some of an evaluation system. While we were unable to document the history of each key results area measure, we suspect that the definitional problems we encountered may stem from the system's attempting to accomplish both objectives simultaneously. The item "consultation and technical assistance requests" provides a good example of how we arrived at this hypothesis.

In the context of this evaluation we were interested in demand among users for various Center services (e.g., consultation regarding how to obtain reference materials and the number of users perceiving the Centers to be a source of technical assistance) in order to assess the effectiveness of outreach activities. In this regard, the combination of concepts (IA and consultation) in one item limits its utility. However, from an internal management perspective the item may indeed be useful. These requests are received by phone or letter and must be answered. Thus, the item allows Center Directors to monitor and document changes in staffing needs over time.

It may be time for a reassessment of the impact reporting system that begins with a detailed statement of its purpose, critiques each measure against this purpose, eliminates those that do not support a given purpose, and retains only those that are central. As it is currently structured the impact reporting system has the appearance of attempting to accommodate <u>every</u> activity of the Network rather than focusing on sound reporting of a more limited set of highly descriptive measures.

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